



## Letter to the Editor

### Re: Sick Building - Sick Patients

Your editorial<sup>1</sup> appropriately points out the need for an environmental medical department in our University of Hawaii Medical Center. Environmental factors that cause disease are addressed in part by specialists in Occupational Medicine, Allergy, Public Health and, to a lesser degree, by nearly every medical doctor. However, there are illnesses caused by environmental agents that are not specifically addressed by any specialties in organized medicine. Allergic patients are particularly highly sensitive to substances that are not bothersome to other individuals. Allergists address those hypersensitive reactions based upon IgE mediated responses; however, many patients' hypersensitivity reactions to chemicals or substances that are not IgE mediated are ruled out as non-allergic with no resolution offered for patients with these problems. The most extreme group of these patients are diagnosed with "idiopathic environmental illness" sometimes dubbed as "Universal Reactors," namely those who "react to essentially everything." Many national organizations have addressed this syndrome and generally concluded that there is not enough scientific evidence to establish that such an entity exists. Others have supported the premise that this syndrome is secondary to "post-traumatic stress syndrome." Consequently, many individuals who are hypersensitive to various chemicals such as mycotoxins, house dust mite toxins, volatile chemicals such as odors (organic vapors) from leis or commercial perfumes, paint fumes, insecticides, cleaning agents, and a multitude of other odiferous chemicals, are looked at in the same light as the severe universal reactors and generally ignored by medical professionals.

The problem of molds as allergens or as mycotoxins is extremely vast. One book on mold allergies, published in 1984, stated that there are over 80,000 species of fungus and yeast identified. Another I recall seeing mentioned over 350,000 different species of molds and fungi. Whatever the true number is, it is extremely high. Many molds thrive in dark, damp, humid environments such as those found in air conditioning conduits and are circulated by air motion. The chemistry of mold differs based upon the media used to culture them, and thus an attempt to study molds is a complex problem.

The chemicals that accumulate in tight structures such as airplanes, tight buildings, and crowded public places also create many problems. These chemicals may out-gas from new materials, either carried on bodies, clothing, or from the structure's construction materials. Many of these chemicals are not bothersome to the majority of people, but are devastating to those who are hypersensitive to them. Individuals who are hypersensitive to chemicals such as perfumes or tobacco smoke odors are subjected to these materials while "entrapped" within an airplane until they reach their destination. To the chemically sensitive individual in which the air within the structure is entirely dependent upon the air-conditioning system, this can create a significant problem.

I agree with Dr. Goldstein that it is important that a Department of Environmental Medicine be developed. Such a department will be confronted with global and endless problems to resolve. Even

defining which environmental problems need to be addressed in such a department is a significant challenge. The Department Head will need to have tremendous courage and foresight to develop methodologies to study and establish means to identify which individuals have problems that are caused by environmental factors within "tight buildings" or other environmental settings, followed with ways and means to resolve these individuals' problems. I think such problems are so vast and vague (usually reported observations) that most physicians feel frustrated to even address them, so consequently we need scientific facts and evidence to identify specific etiologic factors in order to help educate all physicians to better treat patients affected by environmental agents that are presently ignored.

I think Dr. Goldstein has proposed a difficult recommendation, but one that should be addressed with perseverance. Thanks to Dr. Goldstein for his editorial comments.

Sincerely,

Carl W. Lehman MD

#### Reference

1. Goldstein N. Sick Buildings - Sick Patients (Editorial) *Haw Med J* 2002 Jun;61:116,117



ALAINA L. FUKUI-GOO  
RA, GRI, e-PRO, Notary Public

Marcus & Associates, Inc.

(808) 691-3847 DP

(808) 839-7446 Ext. 307

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